THE

ONTARIO WATER RESOURCES

COMMISSION

WATER QUALITY SURVEY

of

LAKE ONTARIO

from

TORONTO TO KINGSTON

1962 to 1965

THE

ONTARIO WATER RESOURCES

COMMISSION

Report on a

WATER QUALITY SURVEY

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Division of Sanitary Engineering

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INTRODUCTION

This report will attempt to correlate the results of samples of the waters of Lake Ontario from Metropolitan Toronto's eastern boundary to the City of Kingston, a distance of 167 miles, and major tributaries thereof in the vicinity of their points of discharge. The samples were collected during 1962-3-4 and part of 1965, by staff of the Ontario Water Resources Commission. The samples from the lake, and in 1962-3 from the tributaries, were collected as part of routine water quality surveys. In 1964, more comprehensive water quality monitoring of the tributaries, involving a program of regular year-round collection of samples for detailed analyses, was initiated to supplement the routine water quality surveys. For the purpose of this report the pertinent results available from this program are included. In addition to the results of samples collected by Commission staff, this report also includes laboratory raw water quality results of samples collected by personnel at specific water works.

The laboratory results of the samples, as discussed in the body of the report, are tabulated in the appended Tables I, II and III. In Table I the results are listed in terms of

bacteriological, chemical, and physical qualities, which are of primary importance in water pollution control programs; in Table II the results are listed in terms of nitrogen and phosphorus values, which are of significance in nutritional and fertility studies of surface waters; and in Table III the results are listed in terms of chemical analyses and physical determinations relevant to drinking water quality. The significance of the laboratory analyses employed to assess the various parameters of pollution and water quality are given in the appendix.

In addition to general information on Lake Ontario in the body of the report, data related to lake levels during the period covered and water supply systems and sewage treatment plants using the waters of Lake Ontario, are included in appended Tables IV, V and VI, respectively.

A map showing the approximate sampling locations and relevant mileages is attached to the report.

LAKE ONTARIO DRAINAGE BASIN

General

The drainage basin of Lake Ontario has an area of 34,630 square miles including 7,540 square miles of lake surface or over 20 per cent of the drainage basin. Of the drainage area 18,710 square miles are in the United States with the remaining 15,920 square miles in Canada. From west to east the

length of the drainage basin is 280 miles and the greatest width from north to south is 240 miles. The lake has an average depth of approximately 250 feet with a maximum recorded depth of almost 800 feet.

With reference to the appended Table IV the maximum and minimum water levels as recorded were 245.79 feet on June 22, 1963 and 241.71 feet on December 19, 1964, respectively.

Physiography

The western and northern parts of the drainage basin are of particular importance to this report.

To the west of the lake the lower lands close to the lake have become covered with silts and sand. At the edge of this lower area are wave-cut cliffs, beaches, bars and deltas. In the higher areas the relief was formed by the shoving and depositing action of the glaciers which left behind the morainic hills, drumlins, eskers and till plains. This area includes the headwaters of the small tributaries to the western portion of Lake Ontario.

The northern part of the drainage basin is located within the Precambrian region. Rock knobs or hills with shallow soil depths predominate. Little of the area is cultivated and it is still largely covered with forest. In the extreme north of the drainage basin elevations of over 1,500 feet above sea level are reached, but the general elevation decreases to the

south and east to the Thousand Islands section of the St. Lawrence River. This region includes the headwaters of the Trent, Moira and Napanee Rivers.

Climate

The Lake Ontario drainage basin lies along the path of many of the low pressure areas which sweep across the northern part of North America from west to east. This results in stormy changeable weather with mild variations in temperature. The highest temperatures are encountered in the area to the west, and the northern part of the drainage basin having the lowest temperatures. The average annual temperature is about 45° Fahrenheit.

HYDROLOGY

The water supply to Lake Ontario which is available for outflow is in the order of 245,000 cubic feet per second, with the major portion contributed from Lake Erie and the remainder from the local drainage basin. The outflow from the lake is controlled in the St. Lawrence River downstream from Prescott at the Iroquois Control Dam. Month to month variations in the water supplies are generally quite small in the late summer and early fall but can be very large during the winter and spring. A change of one foot in the elevation of Lake Ontario in one month would indicate a difference in the water supply and the outflow to be approximately 80,000 cubic feet per second.

LABORATORY RESULTS

Water Pollution Control Aspects

As indicated previously the parameters used most commonly for determining levels of pollution are coliform counts, Biochemical Oxygen Demand, solids content or turbidity, with possibly dissolved oxygen determinations and the corresponding temperatures.

With reference to Table I intermittent or consistent pollution patterns are indicated at the following sample point locations. In each instance explanatory comments are provided:

LO 105.8D: A trend of general improvement in water quality to within Commission objectives is indicated.

LO 106.0: The pollution as indicated by the sampling results of 1964 were contrary to the general pattern established by the results of earlier samples. In addition there was no apparent cause of the indicated pollution. Consequently a follow-up investigation and sampling was carried out during the summer of 1965.

The latest results did not confirm unsatisfactory quality of the water nor did the investigation reveal any immediate sources of pollution. In view of this it is concluded that the water at this particular location is generally satisfactory.

Similar comments and conclusions apply to sample point numbers:

LO 116.2	
LO 125.6	LO 197.3
LO 146.65	LOBQ 44.5
LO 182.8	LOBQ 40.85

LO 107.9: The results indicate deteriorating water quality as the summer season advances.

LO 112.2P: The fluctuations in coliform and BOD values reflect seasonal operational difficulties at the Town of Whitby sewage treatment plant, as a result of industrial wastes.

LO_116.2: Refer to the explanation for sample point No. LO 106.0.

LO_118.190: The high coliform counts and 5-day BOD values in Oshawa Creek at its mouth reflect the adverse influence of inadequately treated tannery wastes being discharged upstream of this point.

LO_118.8H: The high coliform counts and 5-day BOD values in Harmony Creek at Lake Ontario reflect operational dificulties at the Oshawa sewage treatment plant.

LO_125.6: Refer to the explanation for sample point No.LO 106.0.

LO_146.65: Refer to the explanation for sample point No.LO 106.0.

LO_147.0G: The intermittently high coliform counts in the Ganaraska River at its mouth may reflect inadequately treated sanitary waste discharges from the Town of Port Hope.

LO_148.0: The sampling results indicate a water which is periodically in excess of Commission objectives.

LO_148.4G: A trend of general improvement in water quality to within Commission objectives is indicated both at the mouth of Gage Creek and also at Highway #2.

LO_152.8: The high coliform count recorded west of Cobourg may reflect the known operational difficulties at the Cobourg sewage treatment plant during periods of unusual lake current patterns.

LO_153.3CB: The severe pollution problem in Cobourg Brook reflects the Cobourg sewage treatment plant operational problems.

LO_153.31: The high coliform counts and 5-day BOD may reflect the Cobourg sewage treatment plant operational problem.

LO_153.9_&_LO_154.4: The results at these two sampling locations also reflect the inadequacy of sewage treatment facilities at Cobourg.

LO_168.0C: The intermittent high coliform counts and 5-day BOD may be attributed to inadequately treated cannery waste discharges to Colborne Creek.

LO_182.8: Refer to the explanation for sample point No.LO 106.0.

LO_PRB_1.8: A trend of general improvement in water quality to within Commission objectives is indicated.

LO_PRB_2.0B: A general improvement is indicated in water quality to within Commission objectives.

LO_189.9_WB 2.6: The high counts indicated may reflect inadequately treated sanitary or piggery wastes.

LO_197.3: Refer to the explanation for sample point No.LO 106.0.

LO_204.0: The high counts reported may reflect inadequately treated sanitary and industrial waste from the Village of Wellington.

LO_241.2_PEB_5.0: The high counts reflect the presence of inadequately treated cannery wastes at Waupoos.

LO_BQ 51.0: The high count recorded at this point would reflect the presence of inadequately treated sanitary and industrial wastes from Trenton.

LO_BQ 50.2T: The high counts recorded at this point reflect the presence of inadequately treated sanitary and industrial wastes from Trenton.

LO_BQ 50.0: The high counts at this point may represent inadequately treated sanitary wastes from Trenton.

LO_BQ 44.5: Refer to the explanation for sample point No.LO 106.0.

LO_BQ 40.85: Refer to the explanation for sample point No.LO 106.0.

LO_BQ 40.1: A trend of general improvement in water quality to within Commission objectives is indicated.

LO_BQ 39.0: The results appear to indicate deteriorating water quality downstream of Belleville.

LO_BQ 33.75: The intermittent pattern of pollution at this point reflects the presence of inadequately treated cannery wastes from the community of Shannonville.

LO_BQ 23.5: The high counts at this point may reflect the presence of inadequately treated sanitary and industrial wastes being carried in a westerly direction by the current of the Napanee River from the Town of Deseronto.

LO_BQNB 0.5: The intermittent high counts at this point reflects the presence of inadequately treated sanitary and industrial wastes from the Town of Deseronto.

LO_BQPB 4.8: The high count recorded at this point may reflect inadequately treated sewage flows, possibly during a period of malfunction at the Picton sewage treatment plant.

LO_256.2: The high count recorded at this point reflects deteriorating water quality downstream of the Village of Bath.

NUTRITIONAL AND RELATED PROBLEMS

Overfertilization and Biological Productivity

Every lake undergoes an inevitable aging process which is accelerated by the input of nutrients that enrich the aquatic environment. The nutrients originate from domestic and industrial waste as well as from farmland. The most striking evidence of overenrichment is prolific algae growth, which can clog water intakes and filters, pile up on beaches, create unsightly conditions and upon death and decay cause unpleasant odours. Research has shown nitrogen and phosphorus are both essential for the growth of algae and that limitations in amounts of these elements is usually the factor that controls their rate of growth.

Laboratory Results

The nitrogen and phosphorus data as included in Table II are part of a survey being undertaken to determine the relative amounts of fertilizing elements that are contributed by municipalities, industries and land drainage to Lake Ontario. The nitrogen is reported in terms of Free Ammonia; Total Kjeldahl; Nitrite Nitrogen; and Nitrate Nitrogen and the Phosphorus in terms of total and soluble forms. The significances of the various forms of nitrogen and phosphorus are outlined in the appendix.

Due to the limited nature of the data obtained to date as an excerpt from a continuing survey, this information is included for reference purposes only.

CHEMICAL ANALYSES & PHYSICAL DETERMINATIONS

With respect to the chemical analyses and physical determinations reference should be made to Table III and the appended Significance of Laboratory Analyses.

Hardness

With reference to the samples collected at the Oshawa water works during 1962-3-4 it may be seen that although the Lake Ontario water is moderately hard there is a slight increase in hardness each year.

The same condition prevails at Belleville and Kingston with a slight increase in hardness each year.

Alkalinity

It may be noted that an accompanying slight increase in alkalinity has occurred over the 3 year period.

Iron

It is noted that although the iron content of Lake Ontario at Oshawa is well within the Commission objectives there is a slight increase each year. Commission objectives were exceeded at Belleville with fluctuations over the 3 year period, while fluctuations in iron content occurred within Commission's objectives for the same period at Kingston.

Chlorides

It may be noted that although fluctuations occurred at Oshawa, Belleville and Kingston in the chloride content of Lake Ontario water, it was well within the Commission's objectives of 250 ppm.

pH

It may be noted that Lake Ontario water at Oshawa did not fluctuate in pH values outside the limits of this Commission.

It may also be noted that the waters of Lake Ontario in the Bay of Quinte at Belleville exceed the Commission objectives for pH in the alkaline range periodically. The waters of Lake Ontario at Kingston remained within the limits set by the

Commission for the period of this survey for pH values.

Colour and Turbidity

The colour and turbidity of Lake Ontario water at Oshawa and Kingston generally met this Commissions objectives while the waters of the Bay of Quinte at Belleville exceeded the objectives fairly consistently.

SUMMARY

This report deals with water sampling surveys performed on Lake Ontario from Toronto to Kingston during the period of 1962-3-4. In addition, reference is made to a more comprehensive water quality monitoring of the tributaries initiated in 1964.

The surface water quality objectives of the Commission were met at many points in Lake Ontario. Although fluctuating in nature the laboratory analyses results reveal localized areas of pollution in the vicinity of the mouth of many of the tributaries. The adverse influence of sanitary and industrial wastes emanating from the municipalities located at or near the mouth of these tributaries is reflected in both the stream and lake front sampling results. Although sewage treatment is provided by the majority of the municipalities, the effectiveness of this treatment is somewhat minimized in some cases by the presence of domestic sewage or industrial wastes in the storm sewer systems and/or drainage courses. In some instances,

industrial wastes are discharged directly to the receiving waters partially treated or untreated. The extent of pollution from the numerous commercial and pleasure craft using these waters is not immediately known due to difficulties in tracing pollution sources of this nature.

In order to maintain the sanitary chemical and bacteriological qualities of Lake Ontario water to acceptable limits, and to maintain a satisfactory standard of water quality therein adequate treatment of all sanitary and industrial wastes discharged to the lake and its tributaries should be provided.

This three year study revealed results in excess of the OWRC objectives for water quality in the vicinity of the following centres of population.

Town of Whitby
City of Oshawa
Town of Port Hope
Town of Cobourg
Community of Lakeport
Community of Consecon
Village of Wellington
Community of Waupoos
Town of Trenton
City of Belleville
Community of Shannonville
Town of Deseronto
Town of Picton

The study of nutritional and related problems in Lake Ontario through the comprehensive water quality monitoring program commenced in 1964 and its resultant data compiled to-date is considered insufficient in nature for conclusion at this time and therefore is included for reference purposes only.

The chemical analyses and physical determinations on samples collected at the Oshawa, Belleville and Kingston water

works revealed a slight increase, during this survey, in hardness and alkalinity with an acceptable chloride content. The iron content of the Bay of Quinte at Belleville exceeded acceptable limits periodically with some gradual increase in iron in Lake Ontario at Oshawa. The waters of the Bay of Quinte at Belleville were reported as slightly high in pH (alkaline), colour and turbidity while Lake Ontario is considered as generally satisfactory.

RECOMMENDATIONS

Efforts should be continued by the Town of Whitby to correct its intermittent waste treatment problems.

The City of Oshawa should continue its study of operational difficulties at the municipal sewage treatment plant.

The tannery in Oshawa should spare no effort to provide the required pre-treatment of wastes in order to secure a connection to the municipal sewage works system.

The Town of Port Hope should ensure that all inadequately treated sanitary wastes do not gain access to a watercourse.

The Town of Cobourg should proceed without further delay in the very urgent matter of sewage treatment plant expansion.

The local cannery in the community of Lakeport should provide adequate treatment for its industrial waste flows.

The responsible parties at the community of Consecon should ensure that inadequately treated wastes do not gain

access to local surface waters.

The Village of Wellington should proceed with the provision of adequate waste treatment facilities for sanitary and industrial waste flows either on an individual basis or as a municipal project.

Officials of the local cannery at the community of Waupoos should ensure that inadequately treated industrial wastes do not gain access to surface waters.

The Town of Trenton should continue in its program of sanitary sewer extension to include residential and industrial areas not at present served by the municipal sanitary sewerage system.

The City of Belleville should continue its efforts to provide adequate treatment for all contaminated sanitary and industrial waste flows and to arrange for a method of garbage and refuse disposal that will ensure protection for surface water quality.

Increased efforts should be made by the local cannery at the community of Shannonville to provide protection for the Salmon River at this point.

The Town of Deseronto and the local cannery should expend every effort in seeking a solution to their combined waste treatment problems.

The Town of Picton should continue in its efforts to correct the sewage works operational difficulties and also to ensure that all sanitary and industrial waste flows receive adequate treatment.

All of which is respectfully submitted,

District Engineer: _____
J. K. Theil

Approved by: _____
J. R. Barr, Director,
Division of Sanitary Engineering.

Prepared by: A. D. McConnell

/mh

SIGNIFICANCE OF LABORATORY ANALYSES

TABLE I ANALYSES

Bacteriological Examination

The membrane filter technique is employed to obtain a direct enumeration of coliform organisms and is reported per 100 millilitres. The presence of coliforms indicates pollution from human or animal excrement, or from some non-faecal forms. A membrane filter coliform count in excess of the desirable upper limit of 2,400 organisms is considered to render waters undesirable for bathing purposes.

The M.P.N. Index reported by Regional Health Laboratories on drinking water supplies as the "Most Probable Number" (M.P.N.) per 100 millilitres of sample is employed to determine the count of coliform bacteria present in water supplies.

Chemical Analyses

Biochemical Oxygen Demand (BOD)

Biochemical Oxygen Demand is reported in parts per million (ppm), and is an indication of the amount of oxygen required for the stabilization of decomposable organic matter in the water. The completion of the laboratory test requires five days, under the controlled incubation temperature of 20° Centigrade.

The Commission objective for surface water quality is an upper limit of four (4) ppm.

Solids

The value for total solids, expressed in parts per million (ppm), is the sum of the values for the suspended and the dissolved matter in the water. The concentration of suspended solids is generally the most significant of the solids analyses in regard to surface water quality.

The effects of suspended solids in water are reflected in difficulties associated with water purification, depositions in streams and injury to the habitat of fish. Where suspended solids values are less than 20 ppm, laboratory difficulties are experienced and the turbidity is determined instead.

Turbidity

Turbidity is caused by the presence of suspended matter, such as clay, silt, finely divided organic matter, plankton and other microscopic organisms in water. It is an expression of the optical property of a sample and results are reported in "turbidity units"

Physical Determinations

Dissolved Oxygen

The amount of dissolved oxygen contained in unpolluted water fluctuates with the temperature. A deficiency of oxygen is replaced by solution of oxygen from the atmosphere. There is a saturation value for each temperature. At 18°C this is 9.54 ppm of dissolved oxygen. Values below the saturation level indicate

the presence of polluting organic substances which are absorbing oxygen from the water. The extent of this deficiency is one index of the degree of organic pollution. Substantial reduction in dissolved oxygen causes suffocation of fish.

Temperature

The temperature of water influences the solubility of oxygen and the rate of oxidation and purification.

TABLE II ANALYSES

Nitrogen

Ammonia Nitrogen or sometimes called free ammonia is the soluble product in the decomposition of nitrogenous organic matter. It is also formed when nitrates and nitrites are reduced to ammonia either biologically or chemically. Some small amounts of ammonia, too, may be swept out of the atmosphere by rain water.

The following values may be of general significance in appraising free ammonia content: Low 0.015 to 0.03 ppm; moderate 0.03 to 0.10 ppm; high 0.10 or greater.

Total Kjeldahl is a measure of the total nitrogeneous matter present except that measured as nitrite and nitrate nitrogens. The Total Kjeldahl less the Ammonia Nitrogen measures the organic nitrogen present. Ammonia and organic nitrogen determinations are important in determining the availability of nitrogen for biological utilization. The normal range for Total Kjeldahl would be 0.1 to 0.5 ppm.

Nitrite Nitrogen

Nitrite is usually an intermediate oxidation product of ammonia. The significance of nitrites, therefore, varies with their amount, source and relation to other constituents of the sample, notably the relative magnitude of ammonia and nitrate present. Since nitrite is rapidly and easily converted to nitrate, its presence in concentrations greater than a few thousandths of a part per million is generally indicative of active biological processes in the water.

Nitrate Nitrogen

Nitrate is the end product of aerobic decomposition of nitrogenous matter, and its presence carries this significance. Nitrate concentration is of particular interest in relation to the other forms of nitrogen that may be present in the sample. Nitrates occur in the crust of the earth in many places and are a source of its fertility.

The following ranges in concentration may be used as a guide. Low less than 0.1 ppm; moderate 0.1 to 1.0 ppm; high greater than 1.0 ppm.

Phosphorus

Total Phosphorus

Total phosphorus is a measure of both the organic and inorganic forms of phosphorus present.

Soluble Phosphorus

Soluble Phosphorus is a measure of the orthophosphate only and when subtracted from the total phosphorus gives an indication of the concentration of organic phosphorus present. That is, the soluble phosphorus is a measure of the inorganic phosphorus present except the phosphorus in the form of polyphosphate, which, however, in surface waters is usually insignificant. Inorganic phosphorus in concentration in excess of 0.01 ppm may cause nuisance conditions.

TABLE III ANALYSES

Chemical Analyses

Hardness

The hardness of water reflects the nature of the geological formations with which it has been in contact. Hard waters are as satisfactory for human consumption as soft waters. Waters with a hardness of 75-100 ppm are considered moderately hard and waters with a hardness of 150-300 ppm are classified as hard.

Alkalinity

The alkalinity of natural waters is caused by three major classes of materials which may be ranked in order of their effect on pH as follows: (1) hydroxides (2) carbonates and (3) bicarbonates and other salts of weak acids. The alkalinity of a water has little sanitary significance but is of importance in water, sewage and industrial waste treatment practices.

Iron

The OWRC 1964 Drinking Water Objectives set a limit of 0.3 ppm for iron. This limitation is based on consideration of appearance rather than health.

Chlorides

Chlorides in reasonable concentrations are not harmful to humans. At concentrations above 250 ppm they give a salty taste to the water which is objectionable to many people. For this reason, the OWRC 1964 Drinking Water Objectives recommends that chlorides be limited to 250 ppm in supplies intended for public use.

pH

The pH value, for practical purposes, refers to acidity or alkalinity, and is a measure of intensity rather than quantity. The pH scale extends from zero (very acidic) to 14 (very alkaline), with the middle value of 7 corresponding to neutrality at 25° Centigrade. The pH of surface water should be in the range of 6.7 to 8.5.

Physical Determination

Colour and Turbidity

Although these tests do not directly measure the safety of the water, they are related to consumer acceptance of the water. At levels in excess of 15 units of colour and 5 units of turbidity in the raw water consumer acceptance may be conditional upon treatment of the water.

TABLE I

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 99.2	Lake Ontario at Scarborough-Pickering Township boundary	July 16/62	1,600							
		Aug. 27/62	180							
		July 2/63	20							
		Aug. 20/63	13							
		July 30/64	240	4.7	194	13	181			
LO 103.0	Lake Ontario at outlet of Frenchman's Bay	July 16/62	110							
		Aug. 27/62	22							
		July 2/63	20							
		Aug. 20/63	9							
		July 30/64	220							
LO 103.9	Lake Ontario at Liverpool Road	July 16/62	500							
		Aug. 27/62	150							
		July 2/63	110							
		Aug. 20/63	6							
		July 30/64	200							
LO 105.7	Lake Ontario at sideroad 14 & 15 - Squires Beach	July 16/62	120							
		Aug. 27/62	190							
		July 2/63	20							
		Aug. 20/63	60							
		July 30/64	300							
LO 105.8D	Duffin Creek at Lake Ontario	Sept.18/62	28,000	4.6	264			45		
		July 17/63	1,100	2.4	296			23		
		May 27/64	1,900	2.4	368	62	306			

TABLE I-i(cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 105.8D (cont'd)	Duffin Creek at Baseline Road upstream of Ajax sewage treatment plant- 1.8 miles from mouth of creek	June 22/64	1,000	2.5				56	6.0	26
		Aug. 10/64	4,000	0.9	234	36	198		7.6	17.5
		Sept.28/64	1,400	1.0	286			5.5	11.7	11
		Dec. 3/64	420	2.2	334			4.5	13.2	1
		Jan. 21/65	670	2.1	354			2.6	13.2	1
		Feb. 19/65	560						13.8	2
		Mar. 25/65	230	2.6	348	37	311			
LO 106.0	Lake Ontario East of Duffins Creek	July 16/62	630							
		Aug. 27/62	600							
		July 2/63	60							
		Aug. 20/63	54							
		July 30/64	290,000	38	406	258	148			
		July 19/65	16	2.2	214	3	211			
LO 107.9	Lake Ontario at Sideroad 6 & 7 - Pickering Beach	July 16/62	90							
		Aug. 27/62	6,000							
		July 2/63	376							
		Aug. 20/63	4,000							
		July 30/64	1,800							
LO 108.0C	Carruthers' Creek at Sideroad 4 & 5 east of Pickering Beach - 0.5 miles from mouth of creek	Sept.18/62	790	3.6	180			20		
		Aug. 15/63	760	2.2	274	25	249			
		June 22/64	40	1.6	9			9	11.9	27
		Aug. 10/64	130	1.1	236	1	235		6.8	18.5
		Sept.28/64	66	1.5	362			4.0	6.4	11
		Dec. 3/64	120	2.8	512			8.5	11.6	0
		Jan. 21/65	260	3.1	716			5.0		
		Feb. 19/65	20	3.2	350	9	341		9.8	1
		Mar. 25/65	1,100	4.2	444	24	420	11		

TABLE I - ii (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 109.5	Lake Ontario West of Whitby at Pickering - Whitby Township boundary	July 16/62	500							
		Aug. 27/62	400							
		July 2/63	230							
		Aug. 20/63	1,700							
		July 30/64	1,300							
LO 110.6L	Lynde Creek at Baseline Road - 0.9 miles from mouth of creek	Oct. 10/62	210	4.0	276			6.5		
		Sept.17/63	10	2.2	332	4	328			
		June 22/64	400	0.8				48.0	4.75	25
		Aug. 10/64	1,500	1.4	274				6.50	18
		Sept.28/64	700	1.6	320			21.0	8.90	13
		Dec. 3/64	210	2.1	448			8.0	11.4	1
		Jan. 21/65	90	2.0	576			1.7		
		Feb. 19/65	800	7.2	2200	1574	626		10.8	1
		Mar. 25/65	170	3.5	386	28	358	6.0		
LO 112.2P	Pringle Creek at Lake Ontario -Pringle Creek at Brock St.-Whitby- 0.8 miles from mouth of creek	Oct. 10/62	27,000	5.6	272			10.0		
		Sept.17/63	24	2.4	212	7	205			
		June 22/64	4,100	1.2					7.1	24
		Aug. 10/64	10,400	2.4	500				4.1	18
		Sept.28/64	670,000	43.0	404			41.0	1.7	15
		Dec. 3/64	0	41.0	734			42.0	8.6	2
		Jan. 21/65	0	4.8	476			16.0	9.6	6
		Feb. 19/65	0	4.4	456	38	418	--	9.8	5
		Mar. 25/65	0	4.2	790	21	769	8.0		
LO 112.2	Lake Ontario - Centre of Whitby	July 16/62	8							
		Aug. 27/62	126							
		July 2/63	20							
		Aug. 20/63	30							
		July 30/64	1,400							

TABLE I - iii (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 112.7	Lake Ontario - East of Whitby	July 16/62	18							
		Aug. 27/62	800							
		July 2/63	110							
		Aug. 20/63	109							
		July 30/64	1,100							
LO 116.2	Lake Ontario- West of Oshawa	July 16/62	200							
		Aug. 27/62	1,200							
		July 2/63	530							
		Aug. 20/63	78							
		July 30/64	50,000							
		July 19/65	148							
LO 118.15	Lake Ontario at Lakeview Park Pier	July 16/62	22							
		Aug. 27/62	142							
		July 2/63	18	1.4	208			1.7		
		Aug. 20/63	121							
		July 30/64	1,900							
LO 118.19 0	Oshawa Creek at Lake Ontario	Sept.18/62	9,000	2.3	204			6.5		
		Nov. 12/63	1,100	2.0	256	12	244			
	Oshawa Creek at Simcoe St. south- 0.4 miles from mouth of creek	June 22/64	400	38.0				31.0	2.5	25
		Aug. 10/64	170,000	47.0	886	27	859		2.1	18
		Sept.28/64	3,900	34.0	570			45.0	7.7	11
		Dec. 3/64	17,000	4.2	910			7.5	11.0	10
		Jan. 21/65	90	55.0	1082			45.0	11.0	4
		Feb. 19/65	1,310	14.0	440	26	414		12.0	3
		Mar. 25/65	1,340	6.4	508	35	473	38.0		
LO 118.2	Lake Ontario at Harbour Pier - Oshawa	July 16/62	22							
		Aug. 27/62	70							
		July 2/63	114							
		Aug. 20/63	600							
		July 30/64	230							

TABLE I - iv (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 118.8 H	Harmony Creek at Lake Ontario	July 16/62	700							
		Aug. 27/62	3,200							
		Sept.18/62	220,000	12.0	408			32.0		
		July 2/63	1,000	13.0	378	27	351	9.5		
		Aug. 20/63	150,000	7.2	310			5.0		
		Nov. 12/63	243,000	18.0	490	46	444			
	Harmony Creek at Hwy. #401 upstream of Oshawa sewage treatment plant outfall- 1.2 miles from mouth of creek	Aug. 10/64	64,000	0.7	236	2	234		9.5	18
		Sept.28/64	150	0.7	272			2.8	13.1	12
		Dec. 3/64	122	1.7	382			1.1	14.5	1
		Jan. 21/65	78	1.5	384			1.4	14.8	1
		Feb. 19/65	40	2.8	274	1	273		15.1	1
		Mar. 25/65	600	2.8	318	6	312	2.3		
LO 125.6	Lake Ontario - West of Bowmanville	July 16/62	120							
		Aug. 27/62	200							
		July 2/63	210							
		Aug. 20/63	4,000							
		July 30/64	23,000							
		July 19/65	106							
LO 127.1	Lake Ontario - Centre of Bowmanville	July 17/62	220							
		Aug. 27/62	50							
		July 2/63	440							
		Aug. 20/63	26							
		July 30/64	260							
LO 127.5 B	Bowmanville Creek at Lake Ontario.	Sept.19/62	11,000	2.4	280			48.0		
		July 19/63	320	2.6	236			9.5		

TABLE I - v (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 127.5 B	Bowmanville Creek tributary (Soper Brook) at bridge on West Beach Road downstream of Bowmanville sewage treatment plant - 0.6 miles from mouth of creek	June 23/64	1,100	5.4				45.0	5.2	21.5
		Aug. 10/64	0	1.1	268	2	266		8.8	18
		Sept. 28/64	6	1.8	292			10.5	11.7	13
		Dec. 3/64	0	0.9	314			6.0	13.6	1
		Jan. 21/65	0	2.4	312			6.5		
		Feb. 19/65	6	3.3	286	14	272		13.0	2
		Mar. 25/65	2	3.2	314	14	300			
LO 127.5	Lake Ontario - east of Bowmanville	July 17/62	120							
		Aug. 27/62	700							
		July 2/63	280							
		Aug. 20/63	500							
LO 130.8 W	Wilmot Creek at Lake Ontario	Oct. 11/62	900	2.0	220			5.5		
		Sept. 17/63	148	1.2	308	2	306			
	Wilmot Creek at Hwy. #401 - 0.5 miles from mouth of creek	June 23/64	1,800	0.9					9.7	22
		Aug. 10/64	800	1.6	266	15	251		9.0	19
		Sept. 28/64	990	1.0	256			3.6	13.2	12
		Dec. 3/64	58	1.5	282			3.6	14.7	0.5
		Jan. 21/65	3,100	1.9	338			5.0		
		Feb. 19/65	40	2.3	288	19	269		13.2	1
		Mar. 25/65	42	3.0	286	29	257	4.0		
LO 131.1 G	Graham Creek at Lake Ontario	Oct. 11/62	300	3.5	214			6.5		
		Sept. 17/63	0	1.7	260	5	255			
		June 23/64	400	1.8				20.0	4.0	22
		Aug. 10/64	800	1.4	256	29	227		6.3	19
		Sept. 28/64	290	1.0	294			4.0	10.0	12.5
		Dec. 3/64	90	1.1	340			2.3	12.4	1
		Jan. 21/65	56	2.1	352			1.7	12.2	1
		Feb. 19/65	10	2.6	244	6	238		12.8	1
		Mar. 25/65	48	3.1	292	30	262	5.0		

TABLE I - vi (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 146.65	Lake Ontario - West of Port Hope	July 17/62	50							
		Aug. 27/62	600							
		July 2/63	2,590							
		Aug. 20/63	90							
		July 30/64	90,000							
		July 19/65	154							
LO 146.8	Lake Ontario - Port Hope Water Works Intake	July 17/62	8							
		Aug. 27/62	400							
		July 2/63	2,090							
		Aug. 20/63	2,000							
		July 30/64	1,700							
LO 147.0 G	Ganaraska River at Lake Ontario	Sept.17/62	3,900	2.4	218			4.5		
		Sept.18/63	1,200	1.5	208	2	206			
		June 2/64	2,200	1.3	202	7	195			
		June 23/64	6,000	1.2				5.0	8.7	23
		Aug. 10/64	530	0.9	202	19	183		8.3	19.5
		Sept.28/64	640	0.9	226				11.8	14
		Dec. 3/64	1,400	2.0	290				13.2	2
LO 147.0	Lake Ontario - Port Hope Pier Centre	July 17/62	50							
		Aug. 27/62	300							
		July 2/63	1,300	2.5	232			10.0		
		Aug. 20/63	93	1.8	212			2.0		
		July 30/64	2,500							
LO 148.0	Lake Ontario - East of Port Hope	July 17/62	5							
		Aug. 27/62	6,200							
		July 2/63	400							
		Aug. 20/63	3,000							
		July 30/64	3,300	4.7	242	72	170			
LO 148.4 G	Gage Creek at Lake Ontario	Sept.19/62	3,000	2.4	284			18.0		
		Sept.18/63	800	1.8	260	2	258			

TABLE I - vii (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 148.4 G	Gage Creek at Hwy. #2 - 0.3 miles from mouth of creek	June 23/64	3,300	1.2				6.5	8.8	26
		Aug. 10/64	6,000	4.0	218	24	194		10.0	23
		Sept.28/64	570	0.9	258			3.8	10.6	15.5
		Dec. 3/64	400	0.9	324			9.5	12.6	0.5
LO 152.8	Lake Ontario - West of Cobourg	July 17/62	30							
		July 2/63	420							
		Aug. 20/63	23,000							
		July 30/64	140,000							
LO 153.3CB	Cobourg Brook at King St. - 0.4 miles from mouth of creek	July 17/62	48,000							
		Sept.18/63	1,500	19.0	428	12	416			
		June 23/64	530,000	11.0				21.0	7.0	26
		July 29/64	8,400,000							
		Aug. 10/64	120,000,000	50.0	570	77	493		6.95	26
		Sept.28/64	450,000	7.6	362			10.5	11.2	16
		Dec. 3/64	246,000		420			6.5	14.0	2
LO 153.31	Lake Ontario - East of Cobourg Brook	Aug. 28/62	18,200							
		July 2/63	201,000							
		Aug. 20/63	23,000,000	20.0	408			9.0		
		July 29/64	950,000	4.4	474	262	212			
LO 153.9	Lake Ontario - Cobourg East Pier	July 17/62	62							
		Aug. 28/62	12,700							
		July 2/63	3,900							
		Aug. 20/63	1,500	1.6	222			2.9		
		July 29/64	5,200							
LO 154.4	Lake Ontario - Cobourg - East End	July 17/62	40							
		Aug. 28/62	80							
		July 2/63	2,840							
		Aug. 20/63	4,000							
		July 29/64	1,400	1.9	298	33	265			

TABLE I - viii (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 162.6SH	Shelter Valley Brook at Lake Ontario	Sept. 26/62	266							
		Sept. 18/63	98							
	Shelter Valley Brook at Hwy. #2 - 0.8 miles from mouth of creek	June 23/64	200	0.6				8.6	8.9	25
		Aug. 10/64	410	0.7	252	5	247		8.8	18.5
		Sept. 29/64	150	0.7	258				12.3	9
		Nov. 30/64	50	1.7	284				11.8	0
LO 168.0C	Colborne Creek at Lake Ontario	July 17/62	210							
		Sept. 26/62	27,000	14.0	288			5.0		
		July 3/63	1,900							
		Aug. 20/63	210							
		July 29/64	2,800							
		Aug. 10/64	1,900	0.9	248	54	194		11.2	17.5
		Sept. 29/64	196	1.5	272			4.0	12.7	11
		Nov. 30/64	390	1.0	238				12.3	0
LO 169.4	Lake Ontario - Middle of Colborne	Aug. 28/62	140							
		July 3/63	130							
		Aug. 20/63	210							
		July 29/64	3,300							
LO 172.2S	Salem Creek at Lake Ontario	Aug. 10/64	2,000		246	9	237		8.5	18
		Sept. 29/64	116	0.7	250			2.9	11.2	11
		Nov. 30/64	110	1.3	276			1.4	12.8	0
LO 176.8	Lake Ontario - Beginning of Presquile Park	July 17/62	30							
		Aug. 29/62	40							
		Aug. 20/63	60							
		July 29/64	120							

TABLE I - ix (Cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 182.8	Lake Ontario - Beginning of Presquile Bay	July 3/63	64							
		July 29/64	70,000							
		July 19/65	64							
LO PRB 1.8	Presquile Bay at Gosport	July 17/62	30,000							
		Aug. 29/62	50							
		July 3/63	8							
		July 29/64	1,900							
LO PRB 2.0B	Butler Creek at Presquile Bay	Sept.26/62	>150,000	11.0	300			3.5		
		Sept.24/63	1,700	2.8	286	2	284			
		June 18/64	4,200	2.5	276	5	271			
		Aug. 10/64	1,110	1.2	240	10	230		13.3	20.5
		Sept.29/64	1,400	1.2	292			1.1	14.1	12
		Nov. 30/64	600	2.6	394			3.8	14.6	0
LO PRB 4.0S	Smithfield Creek at Presquile Bay	Aug. 10/64	1,090	0.5	279	6	272		9.0	18
		Sept.29/64	2,000	1.4	278			1.3	12.3	10.5
		Nov. 30/64	280	1.7	312			1.8	13.1	0
LO 185.2 WB 0.5	Lake Ontario - Weller Bay - Barcovan Beach	July 17/62	490							
		Aug. 29/62	4							
		July 3/63	700							
		July 29/64	290							
LO 189.9 WB 2.6	Lake Ontario - Weller Bay - Consecon	July 18/62	7,000							
		Aug. 29/62	21,000							
		July 29/64	7,000							

TABLE I - x (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 197.3	Lake Ontario - Huyck Bay	July 18/62	20							
		Aug. 29/62	140							
		July 3/63	190							
		July 29/64	7,000							
		July 14/65	220							
LO 203.3	Lake Ontario - West of Wellington	July 18/62	3,000							
		Aug. 29/62	<10							
		July 3/63	1,110							
		July 29/64	2,000							
LO 204.0	Lake Ontario - East of Wellington	Aug. 29/62	140							
		July 3/63	1,040							
		July 29/64	50,000							
LO 209.7 AB 1.4	Lake Ontario - Athol Bay - Sand Banks	July 18/62	20							
		Aug. 29/62	<100							
		July 3/63	2,000							
		July 29/64	4,500							
LO 241.2 PEB 5.0	Lake Ontario - Prince Edward Bay-Waupoos	July 18/62	500							
		Aug. 29/62	42							
		July 4/63	24,800	5.6	194			1.8		
		July 28/64	13,000							
LOBQ 51.0	Bay of Quinte - West of Trenton	July 4/63	730							
		July 29/64	39,000							

TABLE I - xi (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LOBQ 50.2T	Trent River at Hwy. #2 - 0.2 miles from mouth of river	July 17/62	810							
		Aug. 13/62	40	2.6	160			5.0		
		Aug. 27/62	930							
		July 4/63	800							
		Aug. 20/63	10,000							
		Aug. 11/64	4,500	4.8	184	5	179		2.9	21.5
		Sept.29/64	3,000	3.5	170			5.0	10.0	15
		Nov. 30/64	150	9.9	234			2.8	11.2	3
LOBQ 50.0	Bay of Quinte - East of Trenton opposite sanitary landfill site	July 17/62	220,000							
		Aug. 27/62	11,100							
		July 4/63	8,700	2.5	182			3.1		
		Aug. 12/64	40,000	4.5	282	16	266			
LOBQ 48.5	Bay of Quinte - off Baker Island	Aug. 12/64	900	6.7	188	28	160			
LOBQ 44.5	Bay of Quinte - opposite Redners-ville	July 18/62	120							
		Aug. 29/62	10							
		July 4/63	0							
		July 29/64	10,000							
		July 19/65	400							
LOBQ 40.9	Bay of Quinte - Belleville Water Works Intake	July 19/62	100							
		Aug. 28/62	250							
		July 4/63	390							
		July 29/64	12							
LOBQ 40.85	Bay of Quinte - Belleville - West of Causeway	July 9/63	60							
		July 29/64	500,000							
		July 19/65	200							

TABLE I - xii (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LOBQ 40.2M	Moira River at Hwy. #2	Aug. 11/64	570	1.1	152	6	146		9.1	22
		Sept.29/64	92	1.1	148			0.5	11.6	17
		Nov. 30/64	330	2.2	170			2.9	11.8	4
LOBQ 40.1	Bay of Quinte at Dock - Belleville	July 19/62	1,600							
		Aug. 28/62	160,000							
		July 4/63	180							
		July 29/64	12							
LOBQ 39.0	Bay of Quinte - Belleville - East Boundary	July 29/62	4,500							
		Aug. 28/62	24,000	2.4	150			6.5		
		July 29/64	3,000	2.8	176	16	160			
LOBQ 36.6	Bay of Quinte - Point Anne	July 19/62	600							
		Aug. 28/62	490							
		July 4/63	20							
		July 29/64	1,000							
LOBQ 33.75	Salmon River below Shannonville - 1.8 miles from mouth of river	Sept.24/63	3,900	1.7	272	2	240			
		Aug. 11/64	290	3.7	210	8	202			
		Sept.22/64	12,900	1.5	228			7.0	9.2	14
		Nov. 30/64	70	1.6	238			2.3	14.5	1
LOBQ 29.9	Bay of Quinte - 0.5 miles east of Northport	July 18/62	300							
		Aug. 28/62	290							
		July 4/63	50							
		July 29/64	100							
LOBQ 23.5	Bay of Quinte - Deseronto-Trans-Canada Pipeline Dock	Aug. 28/62	410							
		July 4/63	620							
		July 29/64	5,300							

TABLE I - xiii (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LOBQNB 0.5	Napanee Bay - Deseronto - Metcalfe Road	July 19/62	180,000							
		Aug. 28/62	240							
		July 4/63	920							
		July 29/64	3,300							
LOBQNB 1.0	Napanee Bay - Deseronto - Water Works Dock	July 19/62	1,100							
		Aug. 28/62	310							
		July 4/63	450							
		July 29/64	340							
LOBQNB 1.6	Napanee Bay - Deseronto - East End	Aug. 28/62	270							
		July 4/63	160							
		July 29/64	340							
LOBQN 3.5	Napanee River- 2.5 miles downstream of Hwy. #41 Bridge	Aug. 23/62	16	2.6	188			8.0		
		Sept.23/63	90							
		June 3/64	10	1.8	214	15	199			
LOBQN 6.0	Napanee River at Hwy. #41 Bridge - 6.0 miles from mouth of river	Aug. 11/64	480	2.3	218	6	212			
		Sept.29/64	480	1.3	154			1.7	6.0	16
		Nov. 30/64	94	3.2	208			6.5	8.3	1
LOBQHB 5.4	Hay Bay - 2.5 miles west of Hayburn	July 17/62	2							
		Aug. 28/62	110							
		July 4/63	190							
		July 28/64	50							
LOBQ 16.9	Wilton Creek at Napanee Road - 2.0 miles from mouth of creek	Aug. 11/64	1,100	1.7	410	25	385			
HB 10.7		Sept.29/64	70	2.0				10.0	9.5	13
W 2.0		Nov. 30/64	80	2.8	416			5.5	16.5	0.5

TABLE I -ivx (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LOBQPB 4.8	Picton Bay at Hwy. #33	Aug. 28/62	450							
		Sept.29/64	400							
		July 28/64	138,000	4.1	306	34	272			
LOBQPB 4.3	Picton Bay at Water Works Dock	Aug. 28/62	260							
		July 4/63	1,300							
		July 28/64	450							
LOBQPB 2.0	Picton Bay SE shore 2.8 miles NE of Picton	Aug. 28/62	230							
		July 4/63	10							
		July 28/64	50							
LOBQ 12.1	Adolphus Reach at Glenora Ferry Dock	July 17/62	20							
		Aug. 28/62	390							
		July 4/63	20							
		July 28/64	20							
LOBQ 9.8	Adolphus Reach at Adolphustown Park	July 17/62	17							
		Aug. 28/62	130							
		July 4/63	48							
		July 28/64	830							
LOBQ 1.2	Adolphus Reach at Sandhurst	July 17/62	0							
		Aug. 28/62	14							
		July 4/63	560							
		July 28/64	150							
LO 255.5	Lake Ontario - West of Bath	July 17/62	9							
		Aug. 28/62	30							
		July 3/63	1,300							
		July 28/64	80							

TABLE I - xv (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 256.2	Lake Ontario - Bath Point	July 17/62	0							
		Aug. 28/62	14							
		July 3/63	156							
		July 28/64	9,000							
LO 257.8	Lake Ontario - Millhaven	July 17/62	54							
		Aug. 30/62	2							
		July 3/63	54							
		July 28/64	30							
LO 257.9M	Millhaven Creek at Hwy. #33	Aug. 22/62	170							
		Sept.23/63	4	1.8	200	2	198			
		Aug. 11/64	10	1.0	242	7	235		11.2	22
		Sept.29/64	20	0.9	216			1.4	11.9	17
		Nov. 30/64	70	2.2	228			2.8	13.9	0
LO 260.7	Lake Ontario - Parrot Point	July 17/62	0							
		Aug. 30/62	14							
		July 3/63	38							
		July 28/64	10							
LO 264.4	Lake Ontario - Frontenac West Boundary	July 17/62	6							
		Aug. 30/62	2							
		July 3/63	48							
		July 28/64	60	0.9	222	2	220			

TABLE I - xvi (cont'd)

Sample Point No.	Description	Date	M.F. Coliforms per 100 ml.	5-Day BOD ppm	SOLIDS (ppm) Total	Susp.	Diss.	Turbidity Units	D.O.	°C Temp.
LO 265.2CO	Collins Creek at Hwy. #33	Aug. 21/62	8							
		Sept. 10/63	30							
		July 21/64	8	0.7	212	2	210			
		Aug. 11/64	8	0.7	190	5	185		13.3	22.5
		Sept. 29/64	8	0.7	196			2.5	10.6	17
		Nov. 30/64	20	2.4	206			3.6	13.4	2
LO 266.2	Lemoine Point Airport Water Works Intake	July /62	6							
		July /64	14							
		July /64	138							
		July /64	0							
		July /64	88							
		July /64	1							

TABLE II

Sample Point No.	Description	Date	NITROGEN AS N				PHOSPHORUS as PO4	
			Free Ammonia	Total Kjeldahl	Nitrite	Nitrate	Total	Soluble
LO 105.8D	Duffin Creek at Baseline Road upstream of Ajax sewage treatment plant- 1.8 miles from mouth of creek	June 22/64	1.50	1.65	0.02	trace	1.40	1.04
		Aug. 10/64	0.05	0.91	0.00	0.00	0.14	0.12
		Sept.28/64	0.00	0.13	0.00	trace	0.10	--
		Dec. 3/64	0.10	0.30	trace	0.30	0.12	0.05
		Jan. 21/65	0.20	0.30	0.01	0.45	--	--
		Feb. 19/65	0.40	2.00	trace	0.40	0.24	0.20
		Mar. 25/65	0.50	0.52	0.01	0.54	0.16	--
LO 108.0C	Carruther's Creek at sideroad 4 & 5- east of Pickering Beach	June 22/64	0.13	0.80	0.00	trace	0.20	0.06
		Aug. 10/64	0.08	4.50	0.00	0.00	0.16	0.08
		Sept.28/64	0.08	0.71	0.00	0.00	0.20	0.20
		Dec. 3/64	0.20	0.80	trace	0.00	0.06	0.03
		Jan. 21/65	0.60	1.70	0.02	0.30	0.24	0.00
		Feb. 19/65	0.50	0.90	0.01	0.30	0.24	--
		Mar. 25/65	0.54	0.80	0.01	0.34	0.44	0.08
LO 110.6L	Lynde Creek at Baseline Road - 0.9 miles from mouth of creek	June 22/64	0.11	0.65	trace	trace	0.32	0.12
		Aug. 10/64	0.10	1.70	trace	0.00	0.32	0.14
		Sept.28/64	0.08	0.39	trace	trace	0.24	--
		Dec. 3/64	0.10	0.40	trace	trace	.0.04	0.03
		Jan. 21/65	0.20	0.50	trace	0.55	--	--
		Feb. 14/65	0.40	3.30	trace	trace	6.00	0.30
		Mar. 25/65	0.32	0.80	0.02	0.44	0.20	--
LO 112.1P	Pringle Creek at Brock Street - Whitby - 0.8 miles from mouth of creek	June 22/64	0.22	1.30	0.08	1.80	12.00	--
		Aug. 10/64	1.50	2.20	trace	--	12.00	8.00
		Sept.28/64	3.20	8.30	trace	trace	4.00	3.40
		Dec. 3/64	2.90	6.00	0.02	0.00	0.25	--
		Jan. 21/65	0.10	1.70	0.05	5.50	8.80	8.80
		Feb. 19/65	0.50	1.30	0.02	4.40	5.00	--
		Mar. 25/65	3.20	3.80	0.01	0.72	3.00	--

TABLE II - i (cont'd)

Sample Point No.	Description	Date	NITROGEN AS N				PHOSPHORUS as PO_4	
			Free Ammonia	Total Kjeldahl	Nitrite	Nitrate	Total	Soluble
LO 118.190	Oshawa Creek at Simcoe Street South 0.4 miles from mouth of creek	June 22/64	9.00	12.00	trace	trace	0.88	0.10
		Aug. 10/64	5.80	12.00	0.00	0.00	0.82	0.14
		Sept. 28/64	2.00	8.30	trace	trace	1.80	1.00
		Dec. 3/64	1.50	2.40	0.20	1.70	5.20	--
		Jan. 21/65	3.90	8.30	0.03	0.00	3.00	1.20
		Feb. 19/65	2.50	3.50	0.01	0.20	--	--
		Mar. 25/65	1.50	2.03	0.01	0.30	0.62	0.10
LO 118.8H	Harmony Creek at Hwy. #401 upstream of Oshawa sewage treatment plant outfall - 1.2 miles from mouth of creek	Aug. 10/64	0.05	0.33	0.00	--	0.34	0.32
		Sept. 28/64	trace	0.46	0.00	0.25	0.10	0.10
		Dec. 3/64	0.10	0.20	0.00	0.40	0.08	0.02
		Jan. 21/65	0.10	0.30	trace	1.00	0.48	0.00
		Feb. 19/65	0.20	0.50	trace	0.70	--	--
		Mar. 25/65	0.20	0.43	0.01	0.56	0.10	--
LO 127.5B	Bowmanville Creek at Bridge on West Beach Road - downstream of Bowmanville sewage treatment plant - 0.6 miles from mouth of creek	June 23/64	2.90	1.30	0.06	0.60	0.32	--
		Aug. 10/64	0.45	0.91	0.00	1.50	4.00	3.40
		Sept. 28/64	0.70	1.10	0.05	0.25	3.00	2.80
		Dec. 3/64	0.10	1.40	0.10	1.50	0.17	--
		Jan. 21/65	1.80	2.10	trace	1.10	--	--
		Feb. 19/65	1.50	4.00	trace	0.80	--	--
		Mar. 25/65	2.46	3.00	trace	0.72	--	--
LO 130.8W	Wilmot Creek at Hwy. #401 - 0.5 miles from mouth of creek	June 23/64	0.11	0.33	trace	0.30	0.18	0.06
		Aug. 10/64	0.05	0.39	trace	--	0.20	0.16
		Sept. 28/64	0.00	0.13	0.02	0.80	0.12	0.12
		Dec. 3/64	0.00	0.10	0.00	1.00	0.06	0.02
		Jan. 21/65	0.10	0.40	trace	1.30	--	--
		Feb. 19/65	0.10	0.60	trace	1.00	--	--
		Mar. 25/65	0.06	0.30	0.01	0.72	0.12	0.10

TABLE II - ii (cont'd)

Sample Point No.	Description	Date	NITROGEN AS N				PHOSPHORUS as PO_4	
			Free Ammonia	Total Kjeldahl	Nitrite	Nitrate	Total	Soluble
LO 131.8G	Graham Creek at Lake Ontario	June 23/64	0.29	1.30	0.00	0.00	0.40	0.06
		Aug. 10/64	0.32	0.77	0.00	0.00	0.28	0.18
		Sept. 28/64	0.08	0.20	0.00	0.00	0.14	0.10
		Dec. 3/64	0.10	0.30	0.00	0.30	0.04	0.02
		Jan. 21/65	0.10	0.40	trace	0.80	--	--
		Feb. 19/65	0.10	0.60	trace	0.50	--	--
		Mar. 25/65	0.20	0.43	trace	0.56	--	--
LO 147.0G	Ganaraska River at Lake Ontario	June 23/64	0.13	0.30	trace	0.00	0.22	0.18
		Aug. 10/64	0.05	0.39	0.00	0.00	0.20	0.12
		Sept. 28/64	0.00	0.07	0.00	trace	0.12	0.10
		Dec. 3/64	0.30	0.40	trace	0.25	0.04	0.02
LO 148.4G	Gage Creek at Hwy. #2 - 0.3 miles from mouth of creek	June 23/64	0.10	0.40	0.00	0.00	0.22	0.10
		Aug. 10/64	0.13	0.91	0.00	0.00	0.20	0.06
		Sept. 28/64	0.00	0.26	0.00	trace	0.10	--
		Dec. 3/64	0.10	0.30	trace	0.30	0.10	0.04
LO 153.3CB	Cobourg Brook at King Street - 0.4 miles from mouth of creek	June 23/64	2.80	4.10	0.00	0.00	0.82	0.26
		Aug. 10/64	6.70	17.0	0.00	0.00	2.00	0.24
		Sept. 28/64	4.20	6.60	0.10	0.00	1.10	0.80
		Dec. 3/64	1.90	3.50	0.01	trace	0.16	0.10
LO 162.6SH	Shelter Valley Brook at Hwy. #2 - 0.8 miles from mouth of creek	June 23/64	0.05	0.33	trace	trace	0.14	4.50
		Aug. 10/64	0.08	0.20	0.00	trace	1.06	--
		Sept. 29/64	0.00	0.20	0.00	0.24	0.04	1.30
		Nov. 30/64	0.00	0.70	trace	0.40	0.02	1.70
LO 168.0C	Colborne Creek at Lake Ontario	Aug. 10/64	0.16	0.46	0.00	trace	0.30	0.14
		Sept. 29/64	0.06	0.20	trace	0.25	0.16	0.14
		Nov. 30/64	0.00	0.30	trace	0.50	0.24	0.08

TABLE II - iii (cont'd)

Sample Point No.	Description	Date	NITROGEN AS N				PHOSPHORUS as PO_4	
			Free Ammonia	Total Kjeldahl	Nit-rite	Nit-rate	Total	Soluble
LO 172.2S	Salem Creek at Lake Ontario	Aug. 10/64	0.05	0.33	trace	0.25	0.12	0.04
		Sept.29/64	0.00	0.07	0.00	0.55	0.04	0.04
		Nov. 30/64	0.00	0.07	trace	1.00	0.04	0.02
LO PRB 2.0B	Butler Creek at Presquile Bay	Aug. 10/64	0.16	0.39	--	0.00	1.40	1.40
		Sept.29/64	0.16	0.26	0.02	0.35	0.96	0.90
		Nov. 30/64	0.00	0.30	0.10	0.60	0.58	0.42
LO PRB 4.0S	Smithfield Creek at Presquile Bay	Aug. 10/64	0.06	0.26	0.00	trace	0.18	0.14
		Sept.29/64	0.20	0.00	0.00	0.28	0.04	0.04
		Nov. 30/64	0.00	0.10	trace	0.30	0.06	0.02
LOBQ 50.2T	Trent River at Hwy. #2 - 0.2 miles from mouth of river	Aug. 11/64	0.16	0.78	0.00	trace	1.50	0.04
		Sept.29/64	0.06	0.52	0.00	trace	0.18	0.04
		Nov. 30/64	0.30	0.50	trace	0.20	0.16	0.04
LOBQ 40.2M	Moira River at Hwy. #2	Aug. 11/64	0.13	0.60	0.00	0.00	0.30	0.24
		Sept.29/64	0.08	0.46	0.00	trace	0.16	0.12
		Nov. 30/64	0.00	0.70	0.00	0.00	0.08	0.04
LOBQ 33.7S	Salmon River below Shannonville-1.8 miles from mouth of river	Aug. 11/64	0.16	0.90	0.00	0.00	0.14	0.06
		Sept.22/64	0.64	1.20	trace	0.00	0.32	0.08
		Nov. 30/64	0.00	0.30	0.00	0.00	0.08	0.04
LOBQN 6.0	Napanee River at Hwy. #41 Bridge - 6.0 miles from mouth of river	Aug. 11/64	0.10	1.10	0.00	0.00	0.12	0.06
		Sept.29/64	0.16	0.58	0.00	0.00	0.12	0.04
		Nov. 30/64	0.00	0.60	trace	trace	0.18	0.04

TABLE II - iv (cont'd)

Sample Point No.	Description	Date	NITROGEN AS N				PHOSPHORUS as PO_4	
			Free Ammonia	Total Kjeldahl	Nitrite	Nitrate	Total	Soluble
LOBQ 16.9 HB 10.7W 2.0	Wilton Creek at Napanee Road - 2.0 miles from mouth of creek	Aug. 11/64	0.13	1.20	0.00	0.00	0.24	0.06
		Sept.29/64	0.19	0.84	0.00	0.00	--	--
		Nov. 30/64	0.00	0.60	0.00	0.00	0.18	0.04
LO 257.9 M	Millhaven Creek at Hwy. #33	Aug. 11/64	0.06	0.71	0.00	0.00	0.12	0.06
		Sept.29/64	0.10	0.20	0.00	0.00	0.06	0.04
		Nov. 30/64	0.00	1.20	trace	0.30	0.06	0.04
LO 265.2 CO	Collins Creek at Hwy. #33	Aug. 11/64	0.06	1.40	0.00	0.00	0.12	0.06
		Sept.29/64	trace	0.20	0.00	0.00	0.08	0.04
		Nov. 30/64	0.00	0.30	0.00	0.00	0.08	0.04

All analysis except pH reported in ppm unless otherwise indicated.

TABLE III-A

CITY OF OSHAWA
MUNICIPAL WATER WORKS - RAW WATER
(Lake Ontario)

LO 117.7W

Date	Hardness as $CaCO_3$	Alkalinity as $CaCO_3$	Iron as Fe	Chloride as Cl	pH at Lab.	Colour in Hazen Units	Turbidity Units
Jan. 12/62	126	92	0.10	29	7.6	10	34
Feb. 12/62	132	96	0.16	26	7.5		
April 9/62	122	98	0.27	26	7.9		
May 14/62	132	96	0.15	23	8.1		
June 4/62	136	98	0.15	25	8.1		
July 16/62	130	102	0.05	25	7.9		
Sept. 10/62	126	106	0.00	25	8.0		
Oct. 9/62	126	92	0.13	27	8.2		
Nov. 20/62						<5	1.7
Dec. 12/62	128	94	0.16	23	8.0		
Average	129	97	0.13	25			
Minimum	122	92	0.00	23			
Maximum	136	106	0.27	29			
Feb. 13/63	130	92	0.10	24	7.8		
March 11/63	128	96	0.27	25	7.8	<5	1.8
April 10/63	130	100	0.29	28	8.2		
June 4/63	134	102	0.18	26	8.4		
Sept. 15/63	130	98	0.05	26	8.2		
Nov. 11/63	132	100	0.18	26	8.0		
Average	131	98	0.18	26			
Minimum	128	92	0.05	24			
Maximum	134	102	0.27	28			

TABLE III - A (Cont'd)

CITY OF OSHAWA
MUNICIPAL WATER WORKS - RAW WATER
(Lake Ontario)

LO 117.7W

Date	Hardness as $CaCO_3$	Alkalinity as $CaCO_3$	Iron as Fe	Chloride as Cl	pH at Lab.	Colour in Hazen Units	Turbidity Units
Jan. 16/64	136	102	0.30	26	8.1		
March 25/64	134	102	0.40	26	8.4		
May 22/64	132	98	0.05	28	8.0	<5	1.8
May 25/64	130	98	0.30	26	8.2	<5	1.3
June 30/64	134	98	0.00	23	8.2	<5	2.1
Aug. 18/64	138	98	0.22	25	8.1	<5	1.8
Sept. 14/64	130	98	0.29	26	8.3	<5	2.3
Nov. 16/64	136	96	0.22	25	8.0	<5	1.8
Dec. 28/64	136	100	0.20	29	8.1	—	—
Average	134	99	0.22	26		<5	1.8
Minimum	130	96	0.00	23		<5	1.3
Maximum	138	102	0.40	29		<5	2.3

All analyses except pH reported in ppm unless otherwise indicated

TABLE III - B

CITY OF BELLEVILLE
MUNICIPAL WATER WORKS INTAKE - BAY OF QUINTE

LO BQ 40.9W

Date	Hardness as $CaCO_3$	Alkalinity as $CaCO_3$	Iron as Fe	Chloride as Cl	pH at Lab.	Colour in Hazen Units	Turbidity Units
March 19/62	118	106	0.76	9	7.3	25	4.0
April 2/62	110	92	0.76	4	7.8	20	3.8
April 30/62	110	102	0.54	5	8.6	20	3.8
June 4/62	116	102	0.75	3	8.4	30	5.0
June 21/62	124	108	0.65	6	7.9	40	9.5
July 4/62	124	100	0.20	5	8.9	<5	6.0
September 10/62	104	96	0.44	6	8.6	35	14.0
October 2/62	110	92	0.43	13	7.9	25	8.0
October 19/62	112	96	0.86	10	7.9	15	6.0
November 6/62	126	104	0.13	13	7.6	25	3.5
December /62	118	98	0.20	4	8.0	--	---
December /62	112	96	0.22	4	8.0	8	5.0
Average	115	99	0.49	7		25	6.2
Minimum	104	92	0.13	3		<5	3.5
Maximum	126	108	0.86	13		35	14.0
February 2/63	110	108	0.27	4	7.8	15	1.4
March 4/63	128	114	0.25	5	7.6	15	1.3
April 8/63	126	104	0.34	7	8.0	20	14.0
May 7/63	120	98	0.16	4	8.1	35	4.0
June 4/63	128	110	0.56	6	7.9	25	4.0
Average	122	107	0.32	5		22	4.9
Minimum	110	98	0.16	4		15	1.3
Maximum	128	114	0.56	7		35	14.0

TABLE III - B (Cont'd)

CITY OF BELLEVILLE
MUNICIPAL WATER WORKS INTAKE - BAY OF QUINTE

LO BQ 40.9 W

Date	Hardness as $CaCO_3$	Alkalinity as $CaCO_3$	Iron as Fe	Chloride as Cl	pH at Lab.	Colour in Hazen Units	Turbidity Units
March 13/64	138	312	0.20	10	7.4		
March 31/64	130	110	0.30	16	8.7		
June 3/64	124	104	0.40	6	8.1	25	6
August /64	124	100	0.38	7	8.9		
August /64	136	100	0.39	8	8.9		
August /64	134	100	0.40	9	9.2		
August /64	116	102	0.98	6	8.3		
August /64	120	100	0.96	6	8.5		
September 15/64	110	98	0.90	9	8.1	—	—
Average	126	125	0.55	9		25	6
Minimum	110	98	0.20	6			
Maximum	138	312	0.98	16			

All analyses except pH reported in ppm unless otherwise indicated

TABLE III - C

CITY OF KINGSTON
MUNICIPAL WATER WORKS - RAW WATER

SL 142.0W

Date	Hardness as $CaCO_3$	Alkalinity as $CaCO_3$	Iron as Fe	Chloride as Cl	pH at Lab.	Colour in Hazen Units	Turbidity Units
Jan. 8/62	116	90	0.05	25	8.1		
Feb. 5/62	136	96	0.27	26	8.0		
Feb. 19/62	132	98	0.16	23	8.1		
March 5/62	132	98	0.10	25	7.9	5	1.1
March 20/62	120	98	0.10	26	7.9	5	1.7
April 2/62	126	96	0.13	26	8.2		
April 16/62	126	96	0.10	23	8.0		
April 30/62	126	100	0.22	23	8.2		
May 14/62	126	98	0.13	22	8.0		
May 31/62	126	102	0.20	21			
June 10/62	140	96	0.08	21			
June 25/62	136	94	0.05	24	7.9		
July 9/62	138	98	0.05	24			
July 28/62	138	100	0.20	25			
August 7/62	130	100	0.07	26			
August 20/62	130	100	0.17	26			
Sept. 4/62	128	100	0.05	24			
Sept. 17/62	128	94	0.10	28			
Oct. 1/62	136	96	0.10	27			
Oct. 15/62	128	94	0.10	25			
Oct. 29/62	134	96	0.10	30			
Nov. 12/62	130	90	0.27	34		5	1.1
Nov. 26/62	134	96	0.10	27		5	1.8
Dec. 10/62	128	94	0.16	23	___	5	2.1
Average	130	97	0.13	25		5	1.5
Minimum	116	90	0.05	21			1.1
Maximum	140	102	0.27	30			2.1

TABLE III - C (Cont'd)

CITY OF KINGSTON
MUNICIPAL WATER WORKS - RAW WATER SL 142.0W

Date	Hardness as $CaCO_3$	Alkalinity as $CaCO_3$	Iron as Fe	Chloride as Cl	pH at Lab.	Apparent Colour Units	Turbidity Units
Jan. 8/63	150	96	0.24	23	8.2	<5	2.1
Jan. 21/63	134	98	0.16	25	8.0	<5	1.7
Feb. 5 /63	136	96	1.12	28	8.0	<5	2.7
Mar. 4 /63	134	100	0.13	26	8.0		
May 5 /63	128	92	0.16	23	8.1	<5	2.1
June 4 /63	130	100	0.05	26	8.1	<5	1.3
July 2 /63	132	102	0.22	20	7.8		
Aug. 7 /63	128	102	0.18	28	8.4	5	2.3
Sept. 3 /63	130	98	0.12	36	8.2	<5	0.6
Oct. 7/63	124	98	0.22	21	8.1	<5	0.8
Nov. 4/63	130	98	0.18	24	8.2	<5	1.7
Dec. 3/63	136	98	0.10	26	8.3	<5	1.0
Average	133	98	0.24	26		<5	1.6
Minimum	124	92	0.05	20		<5	0.6
Maximum	150	102	1.12	36		5	2.7

TABLE III - C (Cont'd)

CITY OF KINGSTON
MUNICIPAL WATER WORKS - RAW WATER

SL 142.0 W

Date	Hardness as $CaCO_3$	Alkalinity as $CaCO_3$	Iron as Fe	Chloride as Cl	pH at Lab.	Apparent Colour Units	Turbidity Units
January /64	140	98	0.18	29	8.1	5	1.1
February /64	138	100	0.05	26	8.0	5	1.3
March /64	134	102	0.10	26	7.8	5	1.7
April /64	132	94	0.05	21	8.3	5	3.1
May /64	132	104	0.13	17	8.2	5	2.3
June /64	136	100	0.21	24	7.8	5	1.8
July /64	184	164	0.30	3	7.4	15	1.0
August /64	130	96	0.38	26	7.9		
September /64	130	92	0.19	27	8.4		
October /64	142	96	0.20	26	8.2		
November /64	144	94	0.20	25	8.2		
Average	140	104	0.18	23		5	1.8
Minimum	130	92	0.05	3		5	1.0
Maximum	184	164	0.38	29		15	3.1

TABLE IV

LAKE ONTARIO MEAN WATER LEVELS AT KINGSTON
as recorded by the Hydro-Electric Power Commission of Ontario

MONTH	1962		1963		1964	
January	243.23		244.00		242.86	
February	242.94		243.35		242.30	
March	243.07		243.19		242.25	
April	244.10		244.38		242.98	
May	244.82		245.23		244.05	
June	245.09		245.67		244.49	
July	244.95		245.57		244.51	
August	244.82		245.39		244.16	
September	244.45		244.75		243.72	
October	244.28		244.11		242.95	
November	244.06		243.60		242.29	
December	244.06		243.32		241.84	
Average	244.16		244.38		243.20	
Maximum Daily	245.16	June 17 & 19	245.79	June 22	244.60	June 16
Minimum Daily	242.70	March 6	242.90	March 11	241.73	December 19

TABLE V

MAJOR WATER WORKS SYSTEMS EMPLOYING LAKE ONTARIO WATER

MUNICIPALITY	PLANT INTAKE DATA			TYPE OF TREATMENT
	CAPACITY mgd	DIAMETER inches	LENGTH feet	
Twp. of Pickering				
- Rouge Hills	0.36	none		Infiltration gallery 50' from lake, chlorination
- J. Sherman Scott	1.27	30	1,812	Coagulation and settling in solids contact unit, filtration, chlorination
Town of Ajax				
- Municipal	2.04	36	2,100	Coagulation, settling, filtration, chlorination
Town of Whitby				
- Municipal	2.46	36	2,516	Coagulation, settling, filtration, chlorination, fluoridation, taste & odour control
Town of Oshawa				
- Municipal	11.48	30 36	2,725 3,030	Coagulation, settling, filtration, chlorination, fluoridation, taste & odour control
Town of Bowmanville				
- Municipal	2.30	24	1,824	Flash mixing, settling, chlorination
Town of Port Hope				
- Municipal	1.23	16	1,740	Coagulation, settling, filtration, chlorination
Town of Cobourg				
- Municipal	3.00	26	920	Coagulation, pressure filtration, chlorination, taste & odour control

TABLE V (cont'd)

City of Belleville				
- Municipal	8.0	30	1,420	Microstraining, coagulation, settling, filtration, chlorination
Town of Deseronto				
- Municipal	0.7	10	shore	Chlorination
		8	intake	
Town of Picton				
- Municipal	2.0	16	300	Coagulation, settling, filtration, chlorination, fluoridation, taste & odour control
		12	200	
Village of Bath				
- Municipal	0.2	3	300 (estimated)	Chlorination
Twp. of Ernestown				
- Amherstview	0.9	10	350	Chlorination
- C.I.L. Millhaven	0.36	36	2,370	Pressure filtration, chlorination
		36	398	
Twp. of Kingston				
- Queen's Acres	0.3	6	160	Chlorination

TABLE VI

MAJOR CENTRES OF POPULATION AND INDUSTRIES DISCHARGING WASTES DIRECTLY TO LAKE ONTARIO

MUNICIPALITY	PLANT CAPACITY mgd	OUTFALL DATA DIAMETER inches	OUTFALL DATA LENGTH feet	OUTFALL DATA DEPTH feet	TREATMENT PROVIDED
Twp. of Pickering					
- Bay Road STP	1.25	36	1,300	20	Activated sludge process with primary & final settling, chlorination, raw sludge hauling
Town of Whitby					
- Ontario Hospital	0.4	18	0	0	Activated sludge process with primary & final settling, chlorination, sludge digestion & drying beds
Town of Port Hope					
- Municipal	1.0	24	768	--	Activated sludge process with primary and final settling, sludge digestion
Town of Trenton					
- Municipal	1.0	30	--	--	Primary settling, chlorination and sludge digestion
- RCAF	0.75	--	--	--	Activated sludge process with primary & final settling, chlorination, sludge digestion
City of Belleville					
- Municipal	3.0	36 33	1,175 300	--	Primary settling, sludge digestion, chlorination
Town of Deseronto	--	--	--	--	NIL
Twp. of Ernestown					
- C.I.L. (Terylene) Millhaven	0.04	48	800	--	Activated sludge process with primary & final settling, chlorination, sludge digestion
Village of Bath	--	--	--	--	NIL

YORK CO.
METROPOLITAN TORONTO
LAKE ONTARIO
ONTARIO CO.
PICKERING TWP
WHITBY TWP
EAST WHITBY TWP
WHITBY
OSHAWA
AJAX
DARLINGTON TWP
BOWMANVILLE
DURHAM CO.
CLARKE TWP
NEWCASTLE
HOPE TWP
PORT HOPE
HAMILTON TWP
COBOURG
NORTHUMBERLAND CO.
HALDIMAND TWP
CRAMAHE TWP
COLBORNE
BRIGHTON TWP
MURRAY TWP
BRIGHTON
HASTINGS CO.
SIDNEY TWP
THURLOW TWP
TYENDINAGA TWP
TRENTON
BELLEVILLE
DESERONTO
LENNOX & ADDINGTON CO.
RICHMOND TWP
NAPANEE
ERNESTOWN TWP
FRONTENAC CO.
KINGSTON TWP
KINGSTON
PITTSBURGH TWP
AMELIASBURGH TWP
SOPHIASBURGH TWP
PRINCE EDWARD CO.
HILLIER TWP
HALLOWELL TWP
PICTON
WELLINGTON
N MARYSBURGH TWP
ATHOL TWP
MARYSBURGH TWP
FREDERICKSBURGH
S FREDERICKSBURGH
ADOLPHUS REACH
BATH
NORTH CHANNEL
AMHERST ISLAND
WOLFE ISLAND
ST LAWRENCE RIVER
CANADA
UNITED STATES
ONTARIO WATER RESOURCES COMMISSION
LAKE ONTARIO WATER QUALITY SURVEY
EAST METRO BOUNDARY TO WEST
FRONTENAC COUNTY BOUNDARY
SCALE 1" = 4 MILES
DRAWN BY R W
DATE NOV 1964
CHECKED BY
DRAWING No. 64-87

MOE/LAK O/WAT/ATJM
Ontario Water Resources Co
Water quality survey
of Lake Ontario from atjm